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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,560	02/28/2002	Toshihiko Hatakeda	TSA 009	2175

7590

11/24/2003

Gary C. Cohn PLLC
Suite 105
4010 Lake Washington Blvd., NE
Kirkland, WA 98033

EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 11/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,560

Applicant(s)

HATAKEDA ET AL.

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al. (USPN 6104530) in view of Amimori et al. (USPN 6559915).

Regarding claim 1, Okamura teaches a transparent laminate formed by laminating high refractive -index transparent film layers and metal film layers. Okamura teaches a transparent protective layer functioning as an antiglare layer or antireflection layer, and the optical filter for displays is as shown in Fig. 6 which includes anti-Newton ring layer (53). (col. 29, lines 31-38). Okamura teaches that the visible light reflectance of the antireflection film-bearing surface can be determined through a process part of which includes roughening the opposite surface with sand paper and painting in black. See col. 21, lines 5-12. Furthermore, Okamura discloses reflection of external light by the optical filter for displays can be reduced by forming antireflection layer, which can be formed on the side of electrically conductive surface of a transparent laminate. See col. 20, lines 9-30. However, Okamura does not teach "the average surface roughness (RA) inter-projection distance (SM) of the surface comprising the projection is 0.0008-0.002 and the inter-projection distance (SM) is 150 um or less." Amimori discloses films whose roughness on surface and average interval of particles are evaluated. See col. 29, lines 40-

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52. Amimori teaches a roughness on surface Ra and Rz having various values for different samples as shown in TABLE 1-1. Amimori further teaches that surface roughness or an average interval of particles can be controlled by adjusting the thickness of a hard coat layer and the size of the amount of particles. See col. 10, lines 49-52.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Okamura's laminate formation to adapt Amimori's surface roughness controlling technique. One would have been motivated in view of the suggestion in Amimori that controlling a surface roughness by manipulating the thickness of the layer equivalently provides the desired average surface roughness and inter-projection distance. The use of surface roughness control helps form a film having a high transmittance as taught by Amimori et al.

Regarding claim 2, Amimori discloses amorphous silica particles being used for the purpose of hard coat layers formation as shown in Example 1-3 of col. 29, lines 1-10. Furthermore, Amimori teaches a matt particles to be incorporated into the matted layer includes a material including silicone resins. See col. 25, lines 34-41.

Regarding claim 3, Amimori teaches matt particles to be incorporated into a hard coat layer including silicon dioxide and suggests the size of the matt particles to have average particle diameter of 1-15 um. See col. 12, lines 63-67 and col. 13, lines 5-11.

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2. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. (USPN 6611229) in view of Murata et al. (USPN 6261665).

Regarding claim 4, Fujii teaches a touch panel (9) with two transparent conductive substrates on at least one surface of which a transparent conductive film is formed. Fujii teaches the arrangement is such that the transparent conductive films face each other. Fujii teaches that spacers, electrodes and insulation resin are formed on the two transparent conductive substrates (3, 4) (col. 6, lines 34-52). However, in connection with the touch panel, Fujii does not teach a centerline average surface roughness of the transparent electrode layer surface being .0003 to 0.002 and the inter-projection distance being 150um. Murata on the other hand teaches a method for forming a surface-roughened layer, directly via another layer on one surface or double surfaces of the transparent substrate. See col. 8, lines 66-67 and col. 9, lines 1-26. In addition, Murata discloses a formation process of a surface layer on the surface roughened layer, and the determination of the thickness of the surface-roughened layer. See col. 9, lines 39-67.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fujii's Liquid crystal display system to adapt Murata's technique of a surface-roughened layer formation. One would have been motivated in view of the suggestion in Murata that a surface-roughened layer formation equivalently provides the desired average surface roughness. The use of forming a surface-roughened layer helps achieve stain resistance surface for a liquid crystal display device as taught by Murata.

Regarding claim 5, Murata discloses a formation of multi-coating on the surface roughened layer in order that the coating profiles the projection. See col. 55-63. Murata teaches a

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technique where the projection parts being projected from the surface of the surface-roughened layer (col. 7, lines 63-67).

Regarding claim 6, Murata teaches a resin used for the coating materials (col. 2, lines 27-28) and mentions the use of structures including an UV-curing resin and a silica pigment. See col. 2, lines 33-34.

Regarding claim 7, Murata discloses that various types of silica ultra-micro-particles in the silica can be employed. See col. 11, lines 1-2.

Conclusion

3. The prior art made of record and not relied upon is considered to applicant's disclosure. The following arts are cited for further reference.

U.S. Pat. No. 6,495,253 to Koyama et al.

U.S. Pat. No. 5,459,198 to Sharp

U.S. Pat. No. 5,422,737 to Atoji et al.

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abduselam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

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Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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November, 12, 2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600